MCImetro and McCaw assert that, if the regulatory goal is uniform treatment of all local carriers without distinctions based on technology, the Commission should opt for mutual compensation instead of Staff's one way compensation proposal.

ELI contends that comparisons between AECs and RCCS are inapposite because cellular telephone service is not a direct substitute for the local dialtone services proposed by the applicants. Mr. Montgomery states that positive cross price elasticity[22] does not exist between local dialtone and cellular service because the market demand served by cellular cannot be readily duplicated by fixed wireline alternatives. Rather than exhibiting positive cross elastic effects, the demand relationship between cellular and wireline service is complementary; that is, decreases in the price for cellular phones or cellular usage increase demand for wireline network. This condition explains why cellular services have enjoyed "phenomenal" growth, despite usage charges that far exceed local dialtone charges even where the wireline service is provided under usage sensitive rates. It also explains why cellular service has been relatively unaffected by the lack of reciprocal compensation for calls from wireline networks to cellular phones.[23]

(d) Opponents of one way compensation also dispute Staff's claim that one way compensation is appropriate for applicants because providers of STS services, private coin operated telephone service, private lines and farmer lines are not compensated for traffic terminated on their equipment. ELI and TCG point out that the services mentioned by Staff differ from the facilities based local services proposed by the applicants in terms of cross price elasticity, the insignificance of call terminations (*e.g.*, many coin phones do not permit inbound calling), and other specific economic characteristics. For example, the relationships between demand for local dialtone and the local service of STS services are not true cross elasticities between comparable products. Because the local component of STS is essentially resale of local dialtone, it represents arbitrage, not sustainable economic cross elasticity.

(e) Staff's compensation proposal is premised on the assumption that AECs will capture 10 to 20 percent of USWC's local exchange business market in the competitive zones by the year 2001. Opponents argue that Staff's analysis is flawed because it fails to consider actual market experience, underestimates line stimulation, uses outdated information, fails to take into account likely cost savings, and relies on faulty analogies between AECs and LECs. These arguments are discussed under Issue No. I.

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[22] Mr. Montgomery states that the substitution potential between two products can be determined by analyzing whether there is positive cross price elasticity between them. Positive cross elasticity between services exists when a change in the *price* of one service changes the *demand* for the other one in the same direction.

[23] On the other hand, Mr. Montgomery points out that because cellular is a different market than wireline service, and cellular carriers charge their subscribers for terminating calls, the volume of calls to such phones is substantially lower than calls originated from them.

Bill and Keep Compensation

ELI, MFS, MCImetro, AT&T, and **OCTA** recommend adoption of a "bill and keep" compensation arrangement for the exchange of local and EAS traffic, at least for an initial period to allow local exchange competition to take hold. **TCG** agrees that bill and keep offers many of the same advantages as its proposed flat rate approach.[24] Under bill and keep, no explicit monetary compensation is required for the exchange of traffic terminated on each carriers network. The proposal, also known as mutual traffic exchange, or payment in kind, requires that each carrier absorb the cost of traffic originated and terminated on its own network.

Under a bill and keep arrangement, AECs and incumbent LECs will establish trunk groups between each other's networks with Signaling System 7 (SS7) interconnection. The AECs and incumbent LECs will terminate local and toll traffic over these trunk groups. Termination of local calls will be compensated on an in kind basis. Compensation for terminating toll calls will be compensated based on tariffed switched access charges. The mix of traffic terminated over these trunks may be rated based on a percentage local usage factor (PLU), similar to the percentage interstate usage (PIU) factor that has been used for many years to rate interstate and intrastate traffic between interexchange carriers and LECs. Alternatively, separate toll and local trunks may be utilized.

Bill and keep is premised on the assumption that intercarrier traffic flows will be in balance. If traffic is not in balance, the carrier terminating more calls will incur higher costs. Proponents of bill and keep acknowledge that a new entrant will likely terminate a higher percentage of its originated calls on an incumbent's local network than the incumbent will terminate on the new entrant's network. This does not mean that traffic flows will be imbalanced in favor of the entrant, however. It is the *absolute volume* of calls terminated by each carrier, not the *relative percentage* of calls terminated, that is relevant for ascertaining whether traffic flows are in balance.[25]

ELI witness Montgomery emphasizes that intercarrier traffic is likely to be balanced in a competitive cocarrier environment because AEC customers will exhibit calling patterns very similar to those of LEC customers in the same area. Moreover, unless an AEC's incentives concerning which customers to serve are artificially distorted by discriminatory compensation rules, traffic flows are more likely to be balanced than

[24] The joint recommendations filed by ELI, MFS, AT&T, OCTA and TCG also provide that applicants will file price lists for switched interexchange access services that establish rates not exceeding those of USWC and GTE, as applicable.

[25] Assume, for example, that ELI and USWC each terminate 10,000 calls on the other's network on a given day. Although the number of terminations are equal, the 10,000 calls may represent ten percent of the total traffic originated by ELI, but only one percent of the total calls originated by USWC.

in the case of existing EAS routes. Applicants point out that there is no evidence in the record to support the claim that terminating traffic will not be in balance.

With respect to the issue of traffic balance, MFS witness Peter Schulz testified regarding the local traffic exchanged between MFS Intelenet of New York, Inc. (MFS-NY) and NYNEX in New York City. New York is the only jurisdiction with any significant history relating to switched local traffic exchanged between an entrant and an incumbent LEC. Over the first five months of 1995, 54 percent of the local traffic exchanged between the two carriers was terminated on MFS-NY facilities, and 46 percent was terminated on NYNEX facilities. In every month, NYNEX terminated more traffic with MFS-NY than vice versa. Similarly, traffic balance studies conducted in Washington State disclose a 53:47 split in EAS traffic terminations, a difference of plus or minus three percentage points.[26]

Proponents of bill and keep point out that it is the predominant compensation plan among LECs in the United States for terminating calls in EAS areas. InterLEC terminations of local calls typically occur when an EAS route is established between a calling area served by a regional Bell operating carrier and an area served by a nonBell, or independent, carrier. Bill and keep has worked because the revenue settlements are simple: Each LEC recovers the costs of call origination and termination from its own customers. EAS compensation can also involve division of costs between LECs for trunking and other facilities, but there is no per call compensation between carriers. A similar situation would prevail if bill and keep is applied to traffic exchanged between AECs and LECs. ELI witness Montgomery states that bill and keep will:

> vastly simplify the Commission's new responsibilities in an environment of emerging competition, and it is highly compatible with new incentive forms of regulation. The Commission will not have to develop a new form of compensation for existing or future EAS routes, nor will it have to try to differentiate between EAS and directly competing LECs connections–a task which may be impossible economically. The most critical price squeeze issues go away with [bill and keep] and the Commission can devote its time and resources towards further rationalization of local, toll and access pricing without being continually embroiled in disputes among competitors.

In this context, MFS points out that cash compensation arrangements such as those proposed by the LECs and Staff will generate disputes concerning the rates LECs should impute for terminating traffic. The disagreements that have surfaced in this case regarding the imputation suggest that this issue is extremely contentious. Bill and keep

[26] AT&T, OCTA, ELI, MFS, and TCG recommend that the applicants and incumbents conduct periodic traffic studies of local and EAS traffic terminated to other carriers. These parties also recommend that the Commission establish a docket to monitor traffic balance for the termination of local traffic; to determine the need for reciprocal compensation, and to examine compensation issues not resolved in UM 351.

compensation arrangements would eliminate the time and effort associated with resolving those disputes.

Aside from administrative simplicity, ELI points out that bill and keep avoids the possibility that incumbent carriers will use intercompany compensation as a means to leverage their market power to increase an entrant's cost structure. If applied on an interim basis, bill and keep permits regulators to observe the development of local compensation and take the time necessary to fashion compensation plans that may be feasible in the long term. As noted above, bill and keep for local call termination is compatible with the current switched access charge structure for toll calls. For example, if ELI hands a long distance call to USWC, ELI will pay the same switched access charges as any of the current long distance carriers such as AT&T.

Proponents also contend that bill and keep provides the correct economic incentive for LECs and AECs to design and operate their respective networks to achieve maximum possible efficiency over time. Bill and keep requires each carrier to absorb the cost of all traffic terminating on its network. Therefore, carriers have an incentive to become more efficient by using technology and network architecture to minimize interconnection costs. Usage sensitive compensation schemes, on the other hand, do not create the proper economic incentive to reduce termination costs because cost responsibility is shifted to the carrier originating the calls. Also, as noted above, usage sensitive compensation forces new entrants to mimic the technology and architecture of the incumbents, even though it may be inefficient.

MCImetro argues that bill and keep is the only compensation arrangement that creates incentives for incumbent LECs to cooperate in developing number portability. Without number portability, AECs will be unable to attract customers with a significant amount of incoming calls, creating a traffic imbalance that disadvantages LECs. Number portability will permit AECs to serve customers with incoming and outgoing calls, thereby ensuring that traffic remains in balance.

Dr. Cornell and others also emphasize that bill and keep eliminates the incentive for new entrants to solicit customers with specific calling patterns. If compensation arrangements for traffic termination impose a disproportionate cost burden on AECs, those carriers will have an incentive to attract customers with more incoming than outgoing calls in order to minimize termination charges. Effective competition will occur sooner if this distortion is not present.

Finally, proponents argue that bill and keep saves on transaction costs associated with traffic exchanged between carriers. Bill and keep is the least costly method of compensating carriers for terminating traffic because carriers are not required to incur costs associated with measuring, billing and collecting terminating access charges. Thus, bill and keep will result in a lower total cost floor and drive local exchange rates as low as possible.

Bill and Keep Compensation–Opposing Arguments

USWC, GTE, OITA and **Staff** all oppose bill and keep as a method of interconnection compensation. These parties argue that bill and keep is inappropriate in a competitive environment because it allows AECs to use the facilities of the incumbent LEC for free. According to Dr. Beauvais, bill and keep is uneconomic because new entrants are able to utilize the terminating facilities of an interconnecting carrier at a zero marginal price, creating both static and dynamic inefficiencies. Bill and keep is inefficient in a static sense because AECs will rely on the existing facilities of the incumbent LEC, rather than building out their own networks or seeking alternatives for the delivery of traffic from other potential suppliers such as cable TV companies or electric utilities. Bill and keep is also inefficient in a dynamic sense, because a zero price will cause overconsumption of access services and reduce the incentive to employ new, lower cost technologies as they become available.

USWC, GTE and Staff also maintain that traffic between carriers will not be balanced. While bill and keep arrangements might be appropriate from a theoretical standpoint if traffic between carriers is in balance *and* terminating access charges are equivalent, USWC contends that these conditions are unlikely to occur in practice. As a consequence, one of the providers will not recover the full cost of terminating traffic from the other provider.

According to USWC witness Owens, interoffice traffic between LEC and AEC central offices will be out of balance because of two market realities–the fact that AECs can choose to serve particular types of customers, and because different customers have different patterns of originating and terminating traffic. Other factors that will generate a traffic imbalance include (a) the different mix of businesses and residences in the communities served by the central offices of the two different carriers; (b) monthly fluctuations in AEC traffic mix that will occur with customer growth; and, (c) the fact that different AECs are unlikely to have the same level of success marketing their service to every customer class. According to USWC, these factors will cause the traffic flow between carriers to vary on a monthly basis.

USWC also argues that, even if the volume of traffic exchanged between carriers is roughly equal, LECs will nevertheless experience higher costs to terminate traffic. Arguing in support of the I-USC, Dr. Harris states that AECs are selectively deploying facilities to serve low cost business customers, and leaving the LECs with the obligation of serving high cost customers He argues that interconnection compensation should reflect these underlying cost differentials as well as the value that AECs derive from network redundancy and back up capacity provided by the ubiquitous networks of the LECs.

USWC adds that bill and keep should not be used because USWC will incur substantially greater transport costs than the AECs due to differences in the respective

networks of the providers. According to Mr. Owens, AECs are likely to interconnect at USWC's tandem switches and use USWC's transport network to reach USWC end offices throughout its dispersed service territory. In contrast, traffic terminated by USWC on AEC networks will be confined to a relatively compact serving area. Greater use of USWC's transport network by AECs will cause USWC to incur substantially greater transport costs that cannot be recovered under a bill and keep arrangement.

GTE argues bill and keep is essentially a "forced barter" arrangement that fails to reflect the fact that the value of the interconnection services being exchanged are not the same. Because of "inevitable imbalances in traffic" and "differing cost structures of the various firms," it is not possible for a bill and keep compensation arrangement to provide payments that are equal in value.

Opponents of bill and keep also claim that in kind compensation is incompatible with a multiprovider telecommunications environment. Identification, measurement and pricing of services exchanged is the common business practice observed by competitive firms. USWC witness Dr. Robert Harris emphasizes that no other industry operates on the premise that traffic interchange will be balanced; rather, firms negotiate exchange rates and price the services they provide for each other. He observes:

> The central tenet of economics is that prices play a critically important role in the allocation and distribution of goods and services in a market economy. I agree with Staff's opposition to "bill and keep" because it violates that principle. Furthermore, the use of bill and keep is without empirical foundation in a market economy. There are countless instances in which two businesses provide services to each other. In most cases, businesses price those services and collect payment based on the actual volume of services provided, just as they would any other customer. In a few cases–when bartering is involved–firms trade services in kind, without exchanging money payment; even then, the firms keep an account of what has been provided by each party to the exchange, so that each party knows what is "owed" the other party. In other words, mutual compensation . . . is not observed as a business practice in competitive industries.

Although bill and keep is currently used for EAS traffic exchanged between LECs, opponents argue that in kind arrangements are inappropriate in a competitive environment. Staff witness Turner emphasizes that EAS compensation arrangements were designed to accommodate utilities with similar regulatory obligations and are reasonable because they avoid the costs and complexities of joint compensation, minimize EAS costs, and promote universal service and customer fairness. AECs, on the other hand, are not subject to the same regulatory constraints as the LECs. Dr. Harris further emphasizes that existing EAS compensation was never predicated on the assumption that traffic would be balanced, but rather that each LEC would be made whole for its costs through the revenue requirement, ratemaking, and separations process.

Staff also argues that, because bill and keep allows "free access" to the networks of incumbent LECs, it will create incentives for IXCs to obtain the "lowest priced access by routing traffic via the AEC's free interconnection arrangement." In other words, Staff contends that toll traffic handed off from an IXC to an AEC and then terminated on an LEC network, may be improperly designated as local traffic to avoid payment of switched access charges.

Finally, USWC argues that bill and keep will create incentives for LECs to look outside their traditional exchange boundaries for new customers and to terminate traffic from these customers under existing bill and keep arrangements. USWC states that such LEC "cream skimming" would not be in the public interest.

Commission Findings and Decision: Issue IV(f)

Based on the evidence and arguments presented, the Commission finds that compensation for the exchange of local traffic between the applicants and the LECs in the competitive zones should be based on bill and keep arrangements for an interim period of not more than 24 months. We are persuaded that bill and keep has fewer shortcomings than other compensation proposals made in this case and will function as a reasonable compensation mechanism during the initial stages of competitive entry into the local exchange market. At the same time, we recognize that bill and keep is only a temporary means of accommodating local exchange competition and that a more permanent intercompany compensation mechanism must be developed as competition progresses. Accordingly, we find that an industry work group should be created to address interconnection compensation issues.

The task of the work group shall be to formulate proposals for implementing a reciprocal interconnection rate structure applicable to all switched telecommunications traffic by the end of the 24 month period. We agree with Dr. Beauvais and others who maintain that telecommunications customers will not realize the full benefits of competition until existing classifications such as "toll," "local," and "EAS" are eliminated in favor of a single integrated pricing structure. The advantages of an integrated pricing structure are that it is nondiscriminatory, technologically neutral, and does not entail enforcement problems inherent in current rate structures. It also conveys the correct economic signals, thereby creating incentives for each carrier to make the most efficient use of its network and resources. It is not clear, however, that the transition to an integrated price structure can be accomplished in one step. The work group shall be responsible for evaluating the extent to which a phased approach is necessary, and shall develop appropriate recommendations regarding the timing and implementation of rate structure changes.

The interconnection compensation work group shall consist of representatives from USWC, GTE, Staff, MFS, ELI, MCImetro, and other interested parties, including consumer groups, ILECs, IXCs, and other competitive providers. Staff shall submit a

report to the Commission every six months detailing the progress of the work group. In addition, the applicants, USWC and GTE shall conduct and submit periodic traffic studies of local and EAS traffic exchanged with other carriers. The first study shall be submitted within six months from the date of this order. Additional traffic studies shall be submitted every six months thereafter. This information can be used by the work group to develop its recommendations regarding reciprocal compensation arrangements for terminating traffic.

Our decision to adopt bill and keep on an interim basis will allow the applicants to enter the local exchange market while the Commission concludes a number of important dockets that will have a major impact on interconnection rates paid by telecommunications providers. Before substantial progress can be made toward a new interconnection pricing structure, the Commission must complete the pending universal service and unbundling/repricing dockets. As noted above, we recently issued Order No. 95-1103 in docket UM 731, establishing a method of funding universal service in Oregon. Phase II proceedings are now underway in that docket to resolve implementation issues. In addition, hearings have recently concluded in UM 351. An order specifying the level and extent of unbundling of LEC services will be issued shortly. A likely outcome of that docket will be additional proceedings to determine the extent to which LEC rates must be rebalanced to correspond with the unbundling and pricing policies adopted in UM 351. In our opinion, there must be substantial resolution of these matters before a more permanent compensation structure for interconnecting all carriers can be implemented.

There are several other advantages to implementing bill and keep as an interim compensation mechanism. Because bill and keep is the dominant practice for terminating EAS traffic between adjacent LEC exchanges in Oregon and throughout the nation, it is the least difficult compensation arrangement to implement from an administrative standpoint. The inherent simplicity of bill and keep makes it a sensible choice as a transitional compensation mechanism until a more comprehensive interconnection rate structure can be implemented.

In this context, we note that the reciprocal compensation proposals made by USWC and GTE contemplate that AECs will file access tariffs and cost support data. Presumably, this information would have to be audited before the applicants could begin providing service, to ensure that the proposed interconnection rates exceed TSLRIC, but are not unreasonably high. Evaluating AEC cost data would be extremely time consuming and could delay competitive entry for several months. The interim bill and keep arrangements authorized in this order avoid that process and hasten the provision of competitive local exchange service without any adverse consequences. At the same time, the Commission retains authority pursuant to ORS 759.050(3) to require the AECs to make all filings necessary to justify continued certification as competitive local exchange providers.

Interim bill and keep arrangements will also avoid transactions costs associated with cash based compensation methods because interconnecting carriers will not incur the expense of measuring, collecting, and auditing traffic. This is advantageous during the initial stages of competition, because measurement costs impose a greater relative burden on new entrants, who must spread the capital cost of such systems over much smaller volumes of traffic. The record discloses that interexchange carriers incur significant costs to collect and audit switched access minutes calculated by LECs.

USWC argues that the system it is developing to measure local traffic is inexpensive, but the record suggests otherwise. Cost studies filed by USWC in Washington State show that the cost of local end office switching is more than doubled by the addition of measurement and billing costs. Moreover, in Washington, USWC estimated that the proposed new system would be over three times more costly per minute than the cost to measure switched access minutes of use. Even if we were inclined to adopt a minute of use compensation structure at this time, USWC has not demonstrated that its proposed method of measuring local traffic is reasonable. Until such a system is in place, the LECs could rely on AEC measurements of originating traffic. That process, however, would presumably entail the same type of costs now incurred by IXCs to audit switched access minutes.

The Commission also notes that a number of other jurisdictions have concluded that bill and keep is a reasonable method of compensating carriers for the exchange of local traffic on an interim basis. On October 31, 1995, the Washington Utilities and Transportation Commission adopted bill and keep as an interim compensation measure for local exchange carriers in that state. *WUTC vs. U S WEST Communications, Inc., et al.,* Docket Nos. UT-941464, UT-941465, UT-950146, & UT-950265, at 29-36.[27] On July 24, 1995, the California Public Utilities Commission adopted interim rules requiring LECs and competing local carriers to use bill and keep for interconnection compensation for a one year period. *Orders Instituting Rulemaking and Investigation on the Commission's Own Motion for Local Exchange Service,* Docket Nos. R. 95-04-043 and I. 95-04-044, 163 PUR 4th 155 (Cal. P.U.C. 1995).[28] On February 23, 1995, the Michigan Public Service Commission adopted a modified approach, authorizing bill and keep unless there is a traffic imbalance greater than five percent. *In the Matter of the Application of City Signal, Inc.,* Case No. U-10647, 159 PUR 4th 532, 543-48, 577 (Mich. P.S.C. 1995)

In reaching the decision to use bill and keep as a transitional compensation mechanism, the Commission has considered the opposing arguments raised by USWC, GTE and Staff. For the reasons discussed below, we find those arguments unpersuasive.

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[27] On December 27, 1995, the Washington Commission issued an order on reconsideration in the same dockets, reaaffirming bill and keep intact as the interim compensation measure for local carriers.

[28] On September 27, 1995, the California Commission isssued an order on reconsideration, denying rehearing of its interim rules, and rejecting, *inter alia,* arguments that bill and keep compensation violates the Fifth Amendment of the United States Constitution. 165 PUR 4th 127 (Cal. P.U.C. 1995).

(a) The claim that bill and keep allows "free use" of LEC facilities is predicated on the assumption that AECs will terminate more traffic on LEC networks than vice versa. There are no traffic studies in the record to substantiate that claim. On the contrary, the record indicates that traffic exchanged between AECs and LECs is likely to be within a few percentage points of equilibrium. In fact, traffic studies performed by MFS in New York disclose that where there has been an imbalance, more traffic has been terminated on AEC facilities than on the facilities of the incumbent utility.

We agree with the applicants that bill and keep compensation is appropriate for the early stages of competition because it will not affect traffic flows or influence a carrier's choice of customers. The usage based rates proposed in this docket, on the other hand, would foster traffic imbalances by distorting an entrant's incentives to serve certain types of customers. Notwithstanding LEC arguments to the contrary, we believe that, if the AECs are able to attract and serve customers in the Portland metro area with calling patterns that are similar to adjacent USWC or GTE customers residing in the same area, traffic flows in a competitive cocarrier environment are likely to be in balance.[29]

Even if traffic flows are out of balance, we agree with Dr. Teske that the degree of imbalance must justify the cost of measuring, billing and auditing the traffic. As noted above, there is not enough information in the record to enable the Commission to ascertain the costs associated with those activities.

(b) GTE and USWC argue that, because bill and keep compensation allows AECs to use LEC facilities at a "zero" price, it discourages AECs from using new technology and results in the overconsumption of access services. We disagree. To begin with, the argument assumes that entrants will consume more access services than the LECs; in other words, that traffic flows will not be in balance. As noted above, the record does not support that claim.

Second, we are not convinced that bill and keep will foster inefficiency in the near term. Bill and keep simply requires each carrier to absorb the cost of traffic terminating on its system. Since those costs are ultimately passed along to customers, it would seem that each company has an incentive to reduce interconnection costs to remain competitive. Conversely, the minute of use arrangements proposed by USWC, GTE and Staff may not create a similar incentive, since termination costs are borne by other carriers.

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[29] We also agree that it is the *absolute volume* of calls terminated on carrier networks, not the *relative percentage* of terminated calls, that is relevant to the issue of traffic balance. Obviously, because of the difference in the size, a greater percentage of an AEC's calls will be terminated on LEC facilities. The opposite will be true for the LEC.

Third, new entrants have a significant incentive to build out their own facilities regardless of the method of interconnection compensation. The applicants have already invested in substantial facilities and are presumably interested in maximizing profits by serving as many customers and exchanging as much traffic as possible. They are unlikely to implement business plans based on "overconsumption" of LEC resources because of the obvious uncertainties associated with such a strategy. Moreover, the applicants are unlikely to survive as local exchange providers unless they are capable of providing consistently high quality telecommunications service. By building their own facilities, the applicants will have greater control over service quality provided to their customers and will be less reliant on the networks of the incumbents.

(c) We are not persuaded by the claim that bill and keep is a "forced barter" arrangement because it places the same value on the terminating facilities of each carrier. GTE and USWC fail to recognize that usage sensitive compensation yields the same result. Because usage sensitive pricing imposes interconnection costs on competing carriers, there may be little economic incentive to lower those costs. In fact, depending on how the pricing structure is designed, interconnection rates could gravitate to the level of the least efficient carrier in the marketplace. On examination, both Dr. Cornell and USWC witness Purkey agreed that usage sensitive pricing could yield equal interconnection rates over time.

For similar reasons, we are not persuaded by USWC's argument that bill and keep forces it to absorb higher interconnection costs because of greater use of its transport facilities. USWC's argument presumes the existence of a specific network configuration that may or may not exist once the applicants begin operations. Furthermore, even if USWC is correct, it does not force the conclusion that bill and keep is an unreasonable interim interconnection arrangement. From a regulatory standpoint, USWC is entitled to earn a reasonable rate of return on the assets it has dedicated to utility service. That does not mean that a separate charge must be levied for every functionality or asset placed in service.

We also disagree with Staff's claim that bill and keep compensation will cause carriers to misreport toll traffic in order to avoid payment of switched access charges. While it is conceivable that a carrier would risk decertification by deliberately misreporting traffic, that possibility already exists, and will exist as long as the cost of terminating toll traffic exceeds the cost of terminating local calls. To eliminate the possibility for misreporting traffic altogether, the Commission will, however, have to equalize termination rates, either by raising local termination rates or lowering toll access rates. The record discloses that raising local termination rates to switched access rate levels would create a price squeeze and preclude AECs from entering the local exchange market. Lowering toll access rates, on the other hand, may require a substantial realignment of LEC rates to reduce the level of contribution now incorporated in switched access charges. As emphasized above, the ultimate solution is to develop a single interconnection rate structure applicable to all carriers. That process, however, will take time to accomplish.

Aside from the problems noted above, the Commission has a number of additional concerns with the usage sensitive and flat rate compensation methods proposed in this case:

(a) The record indicates that the minute of use compensation proposals offered in this proceeding do not accurately reflect the manner in which interconnection costs are incurred. Telecommunications networks are engineered primarily to meet system capacity requirements and are largely comprised of nontraffic sensitive costs. Minutes of use consumed during off peak periods thus have a marginal cost of nearly zero. Consequently, a compensation structure that charges the same amount for each minute of use does not convey the accurate price signals and may lead to uneconomic consumption.

By declining to adopt the usage sensitive rate structures presented in this case, we do not intend to foreclose future consideration of measured compensation arrangements that require reciprocal cash payments. The work group established to examine interconnection compensation should carefully evaluate the need for reciprocal payments in a competitive environment that includes not only facilities based carriers such as the applicants, but also other types of telecommunications providers.

(b) The usage sensitive rates proposed by USWC and GTE would make it extremely difficult, if not impossible, for the applicants to compete for medium to high volume customers. Usage rate comparisons presented by Drs. Cornell and Teske disclose that, beyond a moderate usage level, the rates in USWC and GTE retail tariffs are lower than the proposed interconnection rates, effectively placing AECs in a price squeeze. Since customers with higher usage are most likely to consider using an alternative telecommunications provider, the proposed interconnection rates create a significant barrier to competition.

Minute of use interconnection pricing is also problematic because of the predominately flat rate pricing environment for local service in Oregon. As long as flat rate local service is required by law, usage sensitive rates need to be carefully structured to avoid creating a price squeeze. Usage sensitive switched access rates have worked well in the toll market because the retail price structure for toll has traditionally been based on measured usage. Because that is not the case for local service in this state, precautions must be taken to ensure that future usage sensitive rate proposals do not produce anticompetitive effects.

The interconnection rates recommended by Staff and the LECs are also likely to distort normal traffic patterns by encouraging applicants to serve customers with a high volume of incoming calls in order to avoid interconnection charges. Normally, AECs would be expected to also target customers with a significant percentage of outgoing calls in order to maximize the revenue potential from services such as toll. By

disrupting traffic flows within the local exchange market, the usage sensitive rates recommended by the LECs and Staff will result in inefficiency and customer confusion.

(c) We are not persuaded by the imputation analyses offered by USWC to show that its interconnection proposal will not result in a price squeeze. First, it is not clear that USWC used the correct cost methodology to perform its studies. Mr. Purkey acknowledged that the ADSRC methodology differs from the cost methodology approved by the Commission in Phase I of docket UM 351, but asserted that the ASIC methodology used in his analysis mirrored the UM 351 approach. Our understanding is that ASIC and the UM 351 methodology differ in several respects. Second, Mr. Purkey's analysis assumes that certain inputs to the imputation analysis are nonessential rather than essential functions. In Order No. 95-313, we held that all service elements should be treated as essential until such time as an LEC is able to demonstrate that viable alternatives exist in the relevant market. Third, it is not clear that the imputation analyses include all of the necessary functions or the correct usage and price data.

Because of these concerns, we do not place any significant weight to the imputation studies presented in this case.[30] Many of the questions raised in these proceedings regarding imputation will be addressed in docket UM 351. In the meantime, our decision to use bill and keep as an interim compensation mechanism will avoid expensive and time consuming disputes regarding imputation that would otherwise result from choosing a cash compensation approach.

(d) The Commission disagrees with USWC's proposal to include an I-USC in the interconnection charge. The I-USC is not required to ensure that AECs contribute to universal service. Although USWC raises a number of valid concerns,[31] the Commission has already established a method in docket UM 731 to fund universal service in Oregon. On October 17, 1995, we issued Order No. 95-1103, approving an assessment on the intrastate gross revenues of all authorized telecommunications providers.[32] Phase II of that docket is now underway to resolve issues relating to the specific design and implementation of the universal service charge. Furthermore, the applicants have stated that they will comply with Commission imposed universal service requirements. Pursuant to ORS 759.050(2)(c), compliance with such requirements shall be a condition of the applicants' authority to provide local service.

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[30] Since Mr. Montgomery patterned his imputation analysis on the initial approach used by USWC, we have similar concerns regarding the results of his analysis.

[31] As we have observed, AECs will target business customers in the competitive zones and LECs will likely respond by lowering business rates in the zones. Since business rates are substantially above cost, the lost revenue may translate into lost contribution toward universal service. The result may be upward pressure on rates for customers outside of the competitive zones.

[32] RCC's are not included in the assessment because the Commission lacks jurisdiction to impose a universal service charge on those carriers under current law. The Commission intends to seek legislation allowing such a charge to be assessed. Order No. 95-1103 at 11-12.

USWC's proposed I-USC has a number of other flaws that make it unacceptable as a component of interconnection compensation. To begin with, the I-USC is not based on the actual cost of interconnection, but is intended to compensate USWC for lost contribution that results when customers choose an AEC for business service. USWC's calculation of the I-USC also assumes that USWC will lose a business customer for every line obtained by an AEC. As emphasized earlier in this order, the Commission does not agree with the assumption that the local exchange market is static. Rather, we expect that competition will cause local service markets to expand, creating additional customer demand. We also believe that LEC fears of substantial near term net revenue loss are overstated. As MFS points out, it will likely take several months for AECs to begin operations. Once they do, the AECs will compete with incumbent carriers that now supply 100 percent of the local exchange market. This level of LEC market dominance, together with the unavailability of database number portability, should limit AEC market penetration for some time to come.

A second problem with USWC's proposal is that it can collect an I-USC for minutes terminated by customers who were never USWC customers, but were former customers of another LEC. This is clearly inappropriate, since it effectively creates a new revenue source unrelated to USWC's objective of maintaining universal service support. It is also inefficient, because USWC would have no incentive to compete if it could receive contribution from a customer even when it did not incur any cost to provide service.

USWC has also not quantified the level of support necessary to fund universal service or indicated how the monies collected by the I-USC would be used. In contrast to the universal service support mechanism established in docket UM 731, there is no assurance the I-USC would be administered in a manner that is competitively neutral.

Finally, the criteria proposed by USWC for waiving the I-USC are arbitrary and extremely difficult to enforce. They would engender endless disputes over whether an AEC has sustained a "comparable ratio of business to residential customers" or whether it serves a "similar demographic and geographic penetration." Such conditions have the effect of discouraging competitive entry and are unnecessary given our decision in the universal service docket

(e) In addition to our concerns with the I-USC, we also disagree with USWC's proposed interconnection charge. The interconnection charge is a residually priced element designed to recover revenues associated with USWC's proposed Local Transport Restructure (LTR) filing. The Commission has not made a decision on that filing.

(f) The Commission also finds that the one way compensation approach recommended by Staff is not in the public interest. Staff's attempt to achieve "regulatory symmetry" by denying AECs compensation for interconnection would

effectively foreclose meaningful competition for local exchange service. Although USWC and GTE have shouldered responsibility for universal service to date, those obligations will be shared by all telecommunications providers, pursuant to our decision in UM 731. The LECs continue to have responsibility for providing ubiquitous service within their respective service territories, but we are not convinced that COLR status is a liability for the incumbents. As Mr. Montgomery points out, the ubiquitous provider also possesses the opportunity to generate substantial revenues by marketing vertical services to customers. Based on the evidence presented, there is substantial reason to believe that ubiquity may be an asset in a competitive environment.

While Staff asserts that AECs do not have the same regulatory obligations as the LECs, it does not acknowledge the most significant benefit associated with public utility status. As regulated utilities, USWC and GTE are entitled to earn a reasonable rate of return on all assets used to provide utility service. If GTE believes its earnings are unreasonable, it may request a rate increase from the Commission. It may also qualify for interim rate relief under certain circumstances. USWC may also seek regulatory relief if its return falls below below the minimum level specified in its AFOR plan. Competitive providers do not have these options and must rely entirely on their performance in the marketplace.

We also disagree with Staff's attempt to compare AEC operations with those of other providers. We are persuaded that the facilities based services proposed by the applicants are differently situated than the RCCs, STS, and other providers mentioned by Staff. Likewise, we cannot find that the existing RCC compensation structure supports Staff's claim that nonreciprocal compensation will allow AECs to compete effectively in the local exchange market. Instead, we are inclined to agree with Dr. Cornell that nonreciprocal compensation is one reason why cellular service is not perceived by the market as a substitute for local dialtone service.

(g) We decline to adopt the flat rate proposal recommended by TCG. There is insufficient evidence in the record to allow us to determine whether the input assumptions used in calculating the tandem port charge are reasonable. For example, we cannot tell whether the estimated DS1 trunk usage of 216,000 minutes per month is a reasonable approximation of actual usage. Second, we are reluctant to adopt flat rate charges without a more complete understanding of how such an approach corresponds with the cost methodology adopted in Phase I of docket UM 351.

Also, because TCG's proposal is designed to encourage end office terminations, it may skew AEC network architecture decisions. There may be circumstances where it is more efficient for an AEC to use tandem switching. We agree with MCImetro that the Commission should not presume that one type of network architecture is superior to another. Instead, the market should determine how networks are constructed to meet customer needs.

Although we do not adopt TCG's proposal, we believe that flat rate charges warrant further investigation. Based on our understanding of how interconnection costs are incurred, some type of flat rate structure may provide a reasonable basis for compensating carriers. We also agree with Dr. Teske that flat rate carrier compensation arrangements may be more compatible with the flat rate retail pricing environment in Oregon than the usage sensitive proposals offered in this case. In addition, flat rate charges may be simpler and less costly to administer than usage based methods.

Issue IV(f)(1): What arrangements are necessary to accommodate existing extended area service (EAS) routes?

Positions of the Parties

ELI, MFS, MCImetro and **TCG** recommend that new entrants should be allowed to establish EAS routes with incumbent LECs on the same terms and conditions as exist over those routes between incumbent LECs. These parties contend that there is no justification for treating AECs differently from LECs and ILECs. EAS routes were established to reflect communities of interest, which do not change when a customer elects to receive service from another carrier. MFS maintains that it would be discriminatory to require AECs to pay higher rates than LECs for the exchange of EAS traffic. MCImetro contends that requiring AECs to pay switched access charges for EAS traffic would only increase the overall price floor for local exchange services, contrary to the public interest.

AT&T, OCTA, ELI, MFS, and TCG filed joint recommendations stating that applicants will adopt existing local exchange and EAS boundaries for purposes of intercompany compensation.

Staff opposes bill and keep arrangements for EAS traffic handled by AECs. It contends that current EAS arrangements were designed for entities with similar regulatory obligations. Also, the Commission's primary goal in establishing EAS policy was to extend "local" dialing arrangements between adjacent communities where a strong community of interest exists, not to promote economic efficiency in a competitive environment. Staff argues that its one way compensation proposal should apply to traffic between AECs and LECs within and outside the EAS regions.

Staff supports the comprehensive redesign of intercompany network access charges proposed by USWC and GTE, because competition will make access distinctions untenable in the long run. As part of that redesign, Staff agrees that current bill and keep arrangements for EAS traffic exchanged by incumbent LECs should be eliminated. Such changes should not be made in these dockets, however. The record is inadequate to assess the effect of changes in access policy for IXCs, RCCs, and EAS-connecting LECs. Staff recommends a separate EAS proceeding to investigate revenue impacts and consider pricing issues.

GTE argues that this is not the proper forum to integrate AECs into existing EAS arrangements. Since EAS is an interexchange service and the only issue in this case is the applicants' status as local exchange service providers, there is no basis to establish the rates applicants should pay to terminate their EAS-like traffic.

GTE further argues that existing EAS arrangements apply only to specific LECs and were designed to function only in a regulated monopoly environment. Further, current bill and keep arrangements for EAS traffic are merely an administrative detail. The purpose of EAS is to change end user toll billing, not to provide access charge discounts to interexchange service providers.

GTE also contends that LECs have given the Commission control over their end user charges, and in return receive free terminating access service for EAS traffic. Neither AECs nor IXCs have made such a trade, and AECs should be excluded from the existing EAS arrangements, just as IXCs are. GTE maintains that applicants should pay the same access charges to terminate interexchange traffic as IXCs now pay to terminate toll traffic. Ultimately, the Commission must decide whether flat rate EAS is viable in a competitive market.

Finally, GTE maintains that if the Commission approves an interconnection compensation arrangement for EAS-like traffic that is different than for toll traffic, then EAS-like traffic must be defined in the same manner for LECs and AECs. This poses no problem, because the AECs propose to operate in competitive zones that are coextensive with existing LEC exchange areas. But there may be a problem with defining toll calls for rating purposes. Specifically, while some of the applicants intend to define local and EAS-like traffic in a manner consistent with current industry practice, it is not clear that they intend to establish toll rating points consistent with current practices. If they do not, customer toll bills will be affected.[33]

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[33] Presently, toll rates in Oregon are based on mileage bands. The carriers' billing systems assign a mileage band to a given call for bill rating purposes based on the "V and H" location of the "rate center" for the prefixes (i.e., NXX codes) of the number from which the call is made and the number to which it is made. Currently, each LEC NXX code is confined to a single LEC exchange. That is, a call from the Cannon Beach exchange to a number in GTE's Forest Grove exchange is billed based on the mileage between the rate centers for these two exchanges. AECs can mirror this approach if they limit each of their NXX codes to a given exchange and establish rate centers in those exchanges that are fairly close to the existing LEC rate centers. Callers should be billed the same for toll calls between two points, regardless of whether a LEC or an AEC serves the customer being called.

If AECs use the same NXX codes in two or more exchanges, toll billing anomalies will result. If the called party is an AEC customer, and the AEC uses the same NXX code to cover an area from Forest Grove to the Gresham Exchange and uses a rate center for that NXX in downtown Portland, calls from Cannon Beach may be rated with too long a mileage band, and calls to Gresham may be billed with too short a mileage band. It is unclear what the AECs' intentions are in this regard. Especially after the upcoming area code split, GTE believes that applicants will have sufficient NXX codes available to conform to current standards and avoid creating these end user impacts.

USWC also argues that the exchange of EAS traffic on a bill and keep basis is premised on a monopoly environment, which no longer exists. The policy reasons that led the Commission to approve EAS must be reevaluated in a competitive environment. Since all providers are potential competitors, the current approach to EAS is not sustainable and must be converted to interexchange access charges.

USWC acknowledges that it may not be possible to evaluate the impact of competition on EAS in these dockets. Until the Commission can consider an integrated approach to interconnection and compensation, USWC proposes that USWC and the ILECs in the Portland EAS region continue to exchange traffic between their respective customers through the use of the existing bill and keep EAS arrangements.

For traffic between AECs and ILECs within the Portland EAS region, USWC proposes the following interim interconnection arrangement: For traffic delivered by an AEC directly to USWC for termination on ILEC facilities, USWC would charge the AEC tandem switching, tandem switched transport, local switching, and the I-USC. For traffic delivered by an ILEC to USWC for termination on AEC facilities, USWC would pay the AEC its local switching charge. During the interim, incumbent LECs would not be charged for the portion of the traffic that transits each company's respective EAS facilities. Existing compensation relationships between USWC and the ILECs will remain unchanged.

OITA argues that the Commission should establish a fully competitive local exchange market if the applications are granted. The best way to do this is to adopt the model of the competitive interexchange market, including explicit intercarrier compensation. Bill and keep arrangements are only valid in an EAS market with restricted competition.

OITA also argues that EAS is not the subject of these dockets and should not be changed here. AECs should not be permitted to participate in established EAS routes, because EAS is an interexchange service and these applications relate to the establishment of competitive zones, not interexchange authority. Further, OITA states that the Portland EAS region is served by seven LECs, only two of which are parties to these dockets. The other LECs should also be parties to any docket that deals with EAS issues.

OITA asserts that the AECs are free to structure flat rate offerings to their customers within the EAS zones. They are not required to adopt EAS rates imposed on the LECs and are not restricted by existing EAS boundaries. Therefore, AECs do not need EAS to compete.

OITA opposes USWC's recommendation that other LECs in the Portland EAS region pay transport charges for traffic originated by an ILEC and transferred by USWC to a point of interconnection with an AEC. USWC's proposal would alter the current compensation arrangements for EAS traffic between USWC and the other LECs in the

Portland EAS region to resemble the compensation arrangements that USWC proposes for AECs. OITA claims that it is inappropriate to modify EAS arrangements among LECs in these dockets.

Commission Findings and Decision–Issue IV(f)(1)

The Commission disagrees with OITA's claim that EAS issues should not be addressed in this proceeding because (a) these applications involve local exchange competition and EAS is an interexchange service; and (b) not all affected LECs are represented in this docket. In the policy order establishing EAS regions, Order No. 89-815, UM 189, at 7, the Commission stated:

> Flat rate EAS is a hybrid with elements of both local and toll service. EAS is currently provided by local exchange carriers as part of local exchange service, with seven-digit dialing, and local service billing. Because EAS goes beyond local exchange boundaries, however, it is not "local exchange telecommunications service" under Oregon law.

It is appropriate to deal with EAS, as a hybrid service with elements of local service, in the current dockets, for the purpose of distinguishing between local and toll calling for purposes of intercompany compensation.

OITA's second point, that some affected LECs are not represented in this proceeding, is without merit. OITA is an organization that represents those ILECs. Moreover, all LECs had notice of this docket, with the list of issues including the EAS issue. If any LECs did not participate in these dockets, their decision was an informed one.

The Commission disagrees that current EAS arrangements are specific to incumbent LECs and that the AECs should pay switched access charges and subsidies similar to those that IXCs now pay to originate and terminate long distance traffic. Under the proposals made by OITA, USWC, GTE and Staff, calls between exchanges that would otherwise qualify as EAS traffic would instead be toll calls if they originate from a new entrant's customer.[34] We see no justification for treating incumbent LECs and AECs differently for EAS purposes. Since we have decided to adopt bill and keep as an interim compensation method for intraexchange traffic, it would be illogical to impose a different form of compensation for EAS traffic. Moreover, current EAS routes are established based on criteria that consider community of interest calling areas. In the case of AECs, calls between exchanges reflect customer calling areas of interest between two neighboring exchanges just as if calls were handled by the incumbent LECs. The identity of the companies involved is irrelevant. The proposal to treat LECs and AECs

[34] OITA also believes that a call originating from an incumbent LEC customer and terminating with an AEC customer could be a toll call, even if entirely within the existing EAS region.

differently within the EAS region could severely disadvantage the new entrants and hamper competition.

Furthermore, if the entrants are required to pay switched access charges for traffic that would otherwise be EAS traffic, it creates a windfall for the incumbents. The cost of turning the affected routes into local as opposed to toll routes is financed by the EAS surcharge. If such traffic is originated by an incumbent, no access revenues are currently received. No revenues should be generated just because an entrant originates the call.

Until otherwise ordered by the Commission, existing local exchange boundaries and EAS routes shall apply to AECs as well as incumbents for the purpose of distinguishing between local and toll calling and for intercompany compensation. Thus, traffic originated by any authorized local carrier that crosses exchange boundaries within the Portland EAS region shall be treated as a local call. In other words, if an LEC or AEC originates a call that is terminated by another carrier within the EAS region, compensation shall be on a bill and keep basis. Finally, if USWC's or GTE's networks are used to transit calls between an AEC's network and an ILEC's network within the Portland EAS region, USWC or GTE must hand off the call on the same terms and conditions as a call originating on their own networks.

With respect to GTE's concern about toll rating, AECs shall limit each of their NXX codes to a given exchange and establish rate centers in those exchanges that are proximate to the existing LEC rate centers.

In reaching this decision, we recognize that EAS regions were created in a regulated monopoly environment. That environment is changing rapidly. As a number of parties have emphasized, it will be necessary to reexamine EAS as competition expands. The continued viability of existing EAS arrangements should be examined by the work group established to investigate interconnection compensation. As part of that process, the work group shall consider the impact on rates and policy that may result from the transition from existing bill and keep arrangements to an interconnection compensation mechanism based on reciprocal payments.

Issue IV(g): Is the applicants' proposed service compatible with the existing network configuration and other requirements associated with providing enhanced 911 (E-911) service?

Positions of the Parties

Staff believes that the AECs will use equipment that is commonly used in the telecommunications industry. Assuming that the AECs use acceptable engineering and design methods, Staff expects no technical problems regarding the routing of the AECs' E-911 traffic to the USWC selective routing tandem switch and ultimately to the appropriate public safety answering point (PSAP).

ELI states that its proposed service is compatible with the existing network configuration and other requirements associated with providing E-911 service. ELI needs the incumbent LECs to route E-911 calls from subscribers to direct inward dialed numbers as well as the ELI NXX (972). To expedite E-911 capability, ELI will purchase E-911 trunks and database services from existing 911 interconnection tariffs. When formal agreements are drafted between USWC and ELI for other ancillary services, ELI will negotiate E-911 agreements with the relevant governmental authority and the incumbent LEC just as ILECs do.

MFS also states that its services will be compatible with the existing network configuration in Oregon and will meet the requirements associated with providing E-911 service. It will have the capability to complete calls to 911 emergency services and will coordinate with the agency operating the PSAP in each locality that MFS serves, to assure that 911 calls are routed and delivered in the manner desired by the PSAP. Where E-911 service has been implemented, MFS will also make arrangements for the proper delivery of Automatic Number Identification and Automatic Location Identification (ALI) information to the PSAP. As one of its cocarrier arrangements, MFS requests that USWC and GTE be required to provide trunk connections to their 911 tandems and to cooperate in loading ALI and other routing information into databases.

MCImetro agrees to work with the LECs and the emergency service agencies to make the necessary arrangements for compatibility.

Commission Findings and Decision: Issue IV(g)

There is a reasonable basis to conclude that the service proposed by the applicants will be compatible with the existing network configuration and other requirements associated with providing E-911 service. The applicants have primary responsibility to work with the E-911 agencies to make certain that all users of their services have access to the emergency system.

Issue IV(h): What interconnection arrangements between the applicants and LEC should be provided?
(1)What should be the conditions of such arrangements?
(2)What technical issues must be resolved?

Positions of the Parties: Physical Interconnection Issues

ELI, MFS, AT&T, TCG and OCTA filed joint recommendations requesting that LECs and AECs interconnect their facilities at mutually agreed upon meet points. If parties do not agree upon a meet point within 45 days, either may seek appropriate and immediate relief from the Commission.

The signatories to the joint recommendations and **MCImetro** contend that AECs should be allowed to interconnect with LECs for the mutual exchange of local and EAS traffic under the same interconnection arrangements used by incumbent LECs. LEC networks are interconnected using two way dedicated trunks at mutually agreed meet points. Each carrier is responsible for building and maintaining its own facilities up to the meet point and for maintaining common technical specifications at the meet point. In addition, each carrier is responsible for traffic originating on its network up to the meet point and for terminating the traffic handed off from another carrier at the meet point.

ELI opposes USWC's recommendation that interconnection occur just outside the central office of the carrier originating the call. Under that proposal, all interconnection would fall under USWC's Virtual Expanded Interconnection Tariff. ELI contends that USWC's proposal is inefficient and discriminatory, particularly since USWC does not propose modifying existing meet point interconnection arrangements with ILECs. ELI states that there are no unresolved technical issues regarding the interconnection of LEC and AEC networks.

MFS states that there must be a common set of standards to permit physical interconnection of carrier networks. Since USWC and GTE already interconnect with a variety of other carriers, the Commission need not specify the actual terms of interconnection. Instead, AECs should be permitted to designate interconnection meet points so that network economies can be achieved. By limiting interconnection to LEC end offices, existing network inefficiencies will be imposed on AECs. If implementation issues arise, AECs should be allowed to seek relief from the Commission.

TCG contends that the most efficient and economical interconnection between LECs and AECs is to use two way DS1 trunks with full Feature Group D characteristics and SS7 capabilities. Using one way or multiple traffic specific trunks requires additional facilities, which necessarily increases the cost of interconnection. Likewise, it depletes switch capacity by requiring additional ports and imposes costs to prematurely upgrade and expand switch capacity.

TCG also recommends that the location of interconnection facilities should be determined by good faith negotiations between interconnecting parties. The aim of such negotiations should be to equalize the costs and benefits to both parties in selecting and constructing interconnection points. In order to equalize the bargaining power of the parties and create an incentive for the most efficient interconnection, the Commission should require equal sharing of all costs associated with the construction of facilities. TCG stresses that it is inappropriate to allow LECs to unilaterally designate interconnection meet points, since the LECs have an incentive to select locations that will disadvantage the AECs.

Staff states that interconnection between the AECs and LECs should use the same technical methods now used by LECs to interconnect their networks. If all carriers use the same procedures, protocols, and equipment designed for the existing telephone network, no technical problems should arise. The only condition of interconnection should be that applicants not take any action that impairs the ability of the incumbent LECs to meet the service standards specified by the Commission. With interconnected networks, all carriers must cooperate to maintain uninterrupted operation of the combined network.

USWC states that competitive entry by facilities based telecommunications providers will not create technical interconnection issues. In a competitive environment, interconnecting carriers must be able to extend their facilities to the end offices of other providers if they choose, and not be forced to use the facilities of any other provider. Tandem interconnection should also be available. Virtual collocation and expanded interconnection should be offered by all carriers so that interconnection is efficient. Providers should work out mutual arrangements and based on what makes sense in any given circumstance. LECs have negotiated interconnection arrangements for many years and there is no reason to assume the same process will not work with the AECs.

Regarding the location of interconnection facilities, USWC proposes that the carrier originating a call should have the right to establish the interconnection point between the networks. USWC is willing to offer AECs the option of using USWC's transport network to interconnect the AEC switch with other local exchange carriers within the same LATA. USWC currently provides the same functionality for traffic exchanged between IXCs and independent telephone companies. USWC opposes using meet point arrangements, because establishing meet points in the middle of the transport line between the parties' respective switches would result in an unacceptable level of meet points scattered randomly throughout the Portland metropolitan area.

GTE does not believe that the technical aspects of interconnection will be problematic and assumes that the parties will negotiate in good faith to establish mutually agreeable arrangements. Once connections are established, GTE and applicants must negotiate a billing process that will enable the carrier terminating a call to bill applicable charges for local, EAS, and toll calls. Second, if compensation differs between types of traffic, then separate trunk groups will need to be established for each type of traffic in accordance with current industry practice.

Commission Findings and Decision: Issue IV(h) Physical Interconnection

Consistent with our decision that AECs should be treated as cocarriers, the Commission finds that the applicants should be permitted to interconnect with incumbent providers on the same terms and conditions that LECs have used to interconnect their telecommunications networks. This process contemplates that the interconnecting parties will negotiate mutually acceptable locations where network facilities can be joined. In some cases, carriers will decide that the most efficient

connection will be at the end office of one of the carriers. In others, it may be more convenient and less costly to establish meet points to connect network facilities. Because these decisions will vary on a case by case basis, the parties are in the best position to determine the manner in which interconnection should take place. We also agree with TCG that the parties will bargain on more equal terms and have a greater incentive to agree upon the most efficient interconnection if all costs associated with the construction of facilities are shared equally.

The Commission declines to adopt recommendations that would give either the LECs or the AECs the power to unilaterally designate interconnection meet points. In a competitive environment, carriers should not have an opportunity to select interconnection locations that may disadvantage competing providers.

The parties appear to agree that there are no significant technical obstacles to interconnection, provided the AECs follow existing protocols and procedures and install equipment that complies with network standards. Since the applicants have indicated that they intend to abide by such requirements, we have no reason to believe that technical problems will occur. We concur with Staff that the applicants shall not take any action that impairs the ability of the incumbent LECs to meet the service standards specified by the Commission.

GTE's concern regarding trunking arrangements for AEC traffic should be handled in the same manner that such issues are now handled among incumbent providers. Since we have determined that carriers should be compensated for local and EAS traffic using the bill and keep arrangements currently in place for incumbent providers, we presume that similar trunking arrangements are also appropriate.[35]

The Commission anticipates that USWC, GTE and the applicants will negotiate in good faith and will establish mutually acceptable interconnection arrangements in the vast majority of cases. Where parties are unable to agree, they should notify the Commission within three days. We will then take the steps necessary to resolve the dispute on an expedited basis.

Unbundling and Resale Issues

Most of the parties agreed with or did not oppose the provision in the Partial Stipulation that NAC unbundling would be addressed in docket UM 351 rather than in the present docket. Although we adopted this provision of the Partial Stipulation, a number of parties request interim unbundling in these dockets.

[35] According to Dr. Beauvais, LECs now use separate trunk groups for EAS traffic to allow carriers to bill applicable charges for toll traffic.

Positions of the Parties

ELI, MFS, AT&T, TCG, and **OCTA** submitted joint recommendations requesting that USWC and GTE be required to file interim tariffs offering (a) local loops unbundled from switching, channel termination, and channel performance at the prices currently in effect for two wire private line NACs; and (b) NAC connection at the TSLRIC specified in the UM 351 Phase I cost report.

ELI claims that AECs need immediate access to unbundled loops to bring the benefits of local exchange competition to customers throughout Oregon. Without unbundling, competition will proceed to rural areas and residential customers much more slowly, if at all. ELI faces substantial economic barriers to expanding its network to serve certain geographical locations and to extend its advanced services to other customer groups. Requiring unbundled loops on an interim basis is consistent with Order No. 94-1851, which recognized that there might be a need for interim relief pending the outcome of docket UM 351.

MFS concurs that failure to unbundle the local loop will substantially circumscribe the development of local exchange competition. It observes that the incumbent LECs have virtually ubiquitous loops that provide access to every interexchange carrier and virtually all residential and business premises in their territory. Incumbent LECs have had the protection of their monopoly status in building their networks, plus the advantage of favorable franchises, access to rights of way, unique tax treatment, access to buildings on an unpaid basis, and protection against competition. AECs do not share in these advantages, and it would be cost prohibitive and economically inefficient in most cases for them to construct duplicate loop facilities. Moreover, competitors cannot obtain public and private rights of way, franchises, or building access on the same terms that incumbent LECs enjoyed. Without unbundled loops, AECs will not be able to offer competitive service to most of the population in a given area. Various regulatory commissions have concluded that unbundling the loop is essential to local exchange competition

MFS also contends that the price of unbundled loops must bear a reasonable relationship to the retail price charged by the incumbent LEC for a business line. Unbundled loop rates should be based on TSLRIC costs developed in docket UM 351. MFS requests the Commission to specify that the combined cost of the unbundled elements cannot exceed the bundled retail rate. Moreover, until TSLRIC cost studies are complete, USWC and GTE should be required to impute whatever rates they charge for unbundled loops into their own retail rates. Also, the combination of unbundled loop costs and other elements should not exceed total bundled loop costs.

MCImetro requests the Commission to require that USWC and GTE unbundle and make available for resale the 34 unbundled functionalities, or building blocks, listed